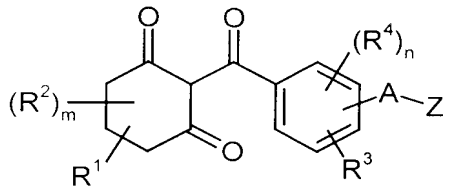
Amendments to the Claims:

This listing of claims will replace all prior versions and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A ~~S~~substituted benzoylcyclohexanedione~~s~~ of the formula (I),



(I)

in which

m represents the numbers 0, 1, 2 or 3,

n represents the numbers 0, 1, 2 or 3,

A ~~represents the single bond or~~ represents alkanediyl (alkylene),

R^1 represents hydrogen or represents unsubstituted or substituted alkyl or alkoxycarbonyl,

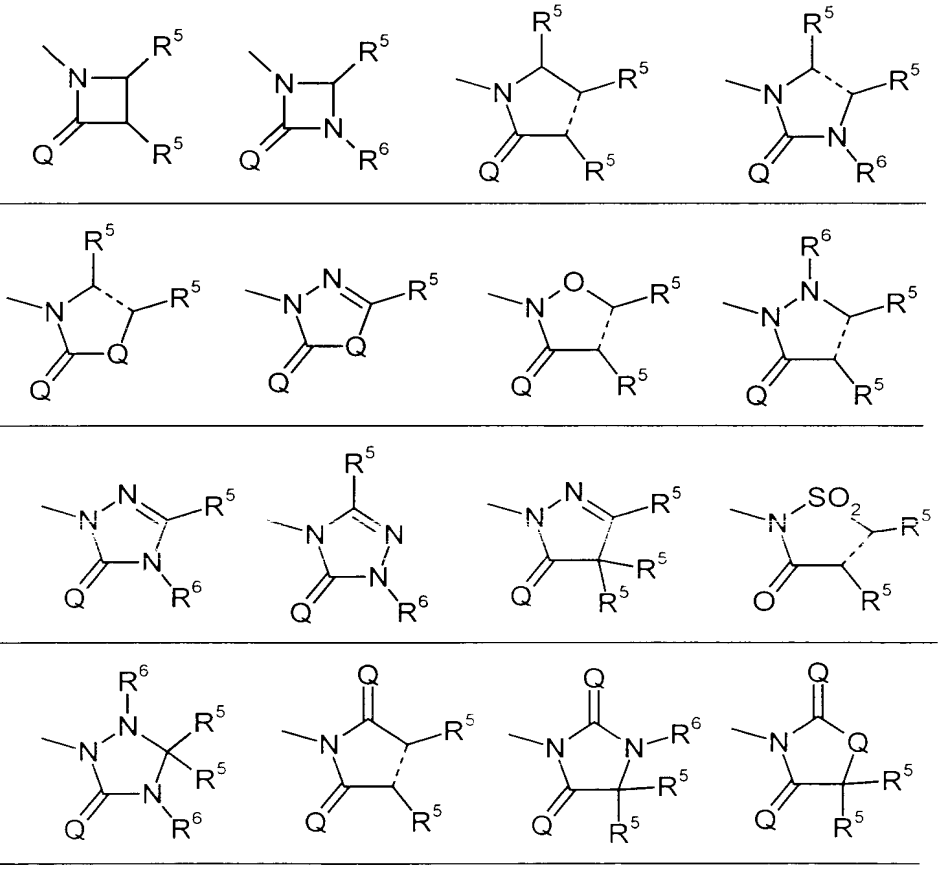
R^2 represents unsubstituted or substituted alkyl, or together with R^1 represents alkanediyl (alkylene) where in this case m represents 1 and R^1 and R^2 are located at the same carbon atom ("geminal") or at two adjacent carbon atoms ("vicinal"),

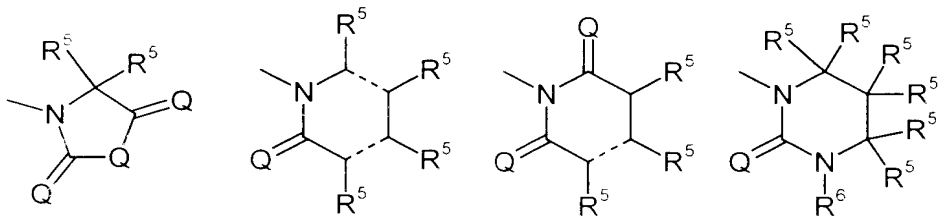
R^3 represents hydrogen, nitro, cyano, carboxyl, carbamoyl, thiocarbamoyl, halogen, or represents unsubstituted or substituted alkyl, alkoxy,

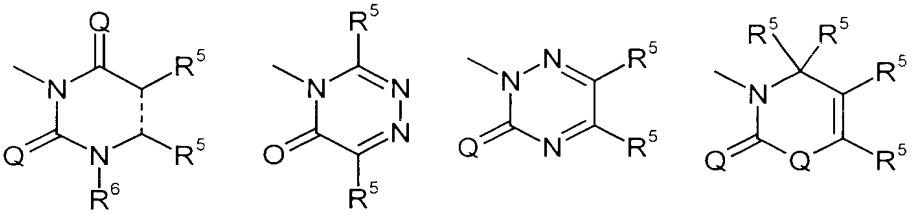
alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, dialkylamino or dialkylaminosulphonyl,

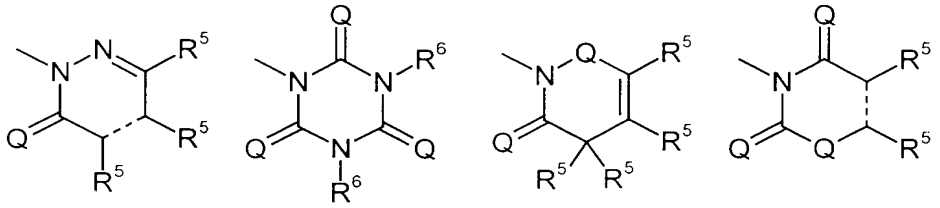
R^4 represents nitro, cyano, carboxyl, carbamoyl, thiocarbamoyl, halogen, or represents unsubstituted or substituted alkyl, alkoxy, alkylthio, alkylsulphinyl, alkylsulphonyl, alkylamino, dialkylamino or dialkylaminosulphonyl, and

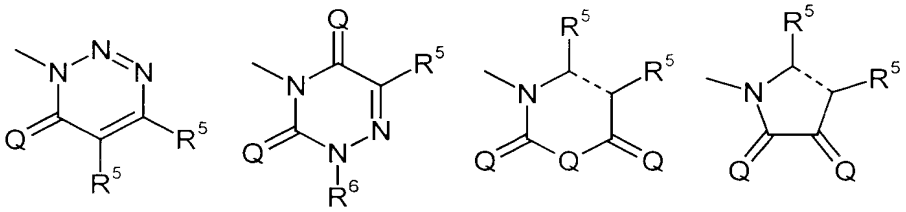
Z represents ~~an unsubstituted or substituted 4- to 12-membered, saturated or unsaturated, monocyclic or bicyclic, heterocyclic grouping which contains 1 to 4 heteroatoms, and which additionally contains one to three groups selected from oxo groups (C=O), thioxo groups (C=S) and mixtures thereof as components of the heterocycle,~~one of the heterocyclic groupings below

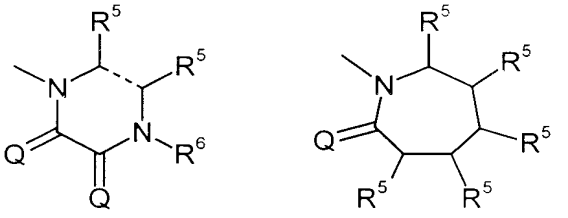












in which the bond drawn broken in each case denotes a single bond or a double bond,

Q represents oxygen,

R^5 represents hydrogen, hydroxyl, mercapto, cyano, halogen, or represents unsubstituted or halogen-, C_1-C_4-alkoxy-, C_1-C_4-

alkylthio-, C_1-C_4-alkylsulphinyl- or C_1-C_4-alkylsulphonyl-substituted alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl or alkylsulphonyl having in each case up to 6 carbon atoms in the alkyl groups, or represents unsubstituted or halogen-substituted alkylamino or dialkylamino having in each case up to 6 carbon atoms in the alkyl groups, or represents unsubstituted or halogen-substituted alkenyl, alkinyl, alkenyloxy, alkenylthio or alkenylamino having in each case up to 6 carbon atoms in the alkenyl or alkinyl groups, or represents unsubstituted or halogen-substituted cycloalkyl, cycloalkylalkyl, cycloalkyloxy, cycloalkylthio or cycloalkylamino having in each case 3 to 6 carbon atoms in the cycloalkyl groups and optionally up to 4 carbon atoms in the alkyl moiety, or represents unsubstituted or halogen-, C_1-C_4-alkyl- or C_1-C_4-alkoxy-substituted phenyl, phenyloxy, phenylthio, phenylamino, benzyl, benzyloxy, benzylthio or benzylamino, and

R^6 represents hydrogen, hydroxyl, amino, alkylideneamino having up to 4 carbon atoms, or represents unsubstituted or halogen- or C_1-C_4-alkoxy-substituted alkyl, alkoxy, alkylamino, dialkylamino or alkanoylamino having in each case up to 6 carbon atoms in the alkyl groups, or represents unsubstituted or halogen-substituted alkenyl, alkinyl or alkenyloxy having in each case up to 6 carbon atoms in the alkenyl or alkinyl groups, or represents unsubstituted or halogen-substituted cycloalkyl, cycloalkylalkyl or cycloalkylamino having in each case 3 to 6 carbon atoms in the cycloalkyl groups and optionally up to 3 carbon atoms in the alkyl moiety, or represents unsubstituted or halogen-, C_1-C_4-alkyl- or C_1-C_4-alkoxy-substituted phenyl or benzyl, or together with an adjacent radical R^5 or R^6 represents unsubstituted or halogen- or C_1-C_4-alkyl-substituted alkanediyl having 3 to 5 carbon

atoms, or - in the case that two adjacent radicals R^5 and R^5 are located at a double bond - together with the adjacent radical R^5 also represents a benzo grouping

including all possible tautomeric forms of the ~~compounds~~substituted benzoylcyclohexanedione of the formula (I) and the possible salts of the ~~compounds~~substituted benzoylcyclohexanedione of the formula (I).

2. (Currently Amended): A ~~S~~substituted benzoylcyclohexanedione~~s~~ according to Claim 1, wherein:

m represents the numbers 0, 1 or 2,

n represents the numbers 0, 1 or 2,

A ~~represents a single bond or~~ represents alkanediyl (alkylene) having 1 to 4 carbon atoms,

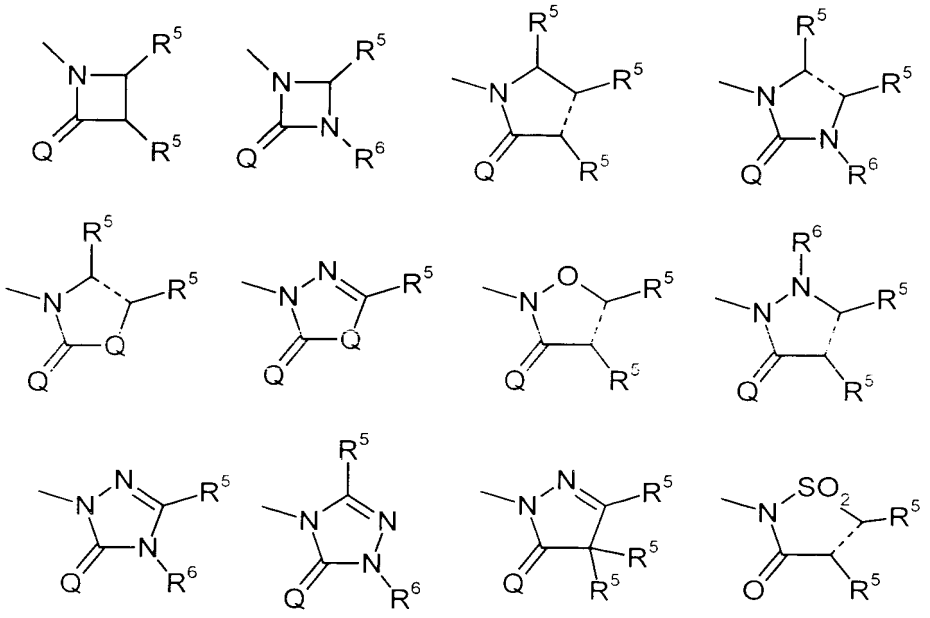
R^1 represents hydrogen, or represents unsubstituted or halogen-, C_1-C_4-alkoxy-, C_1-C_4-alkylthio-, C_1-C_4-alkylsulphinyl- or C_1-C_4-alkylsulphonyl-substituted alkyl having 1 to 6 carbon atoms or represents alkoxycarbonyl having up to 6 carbon atoms,

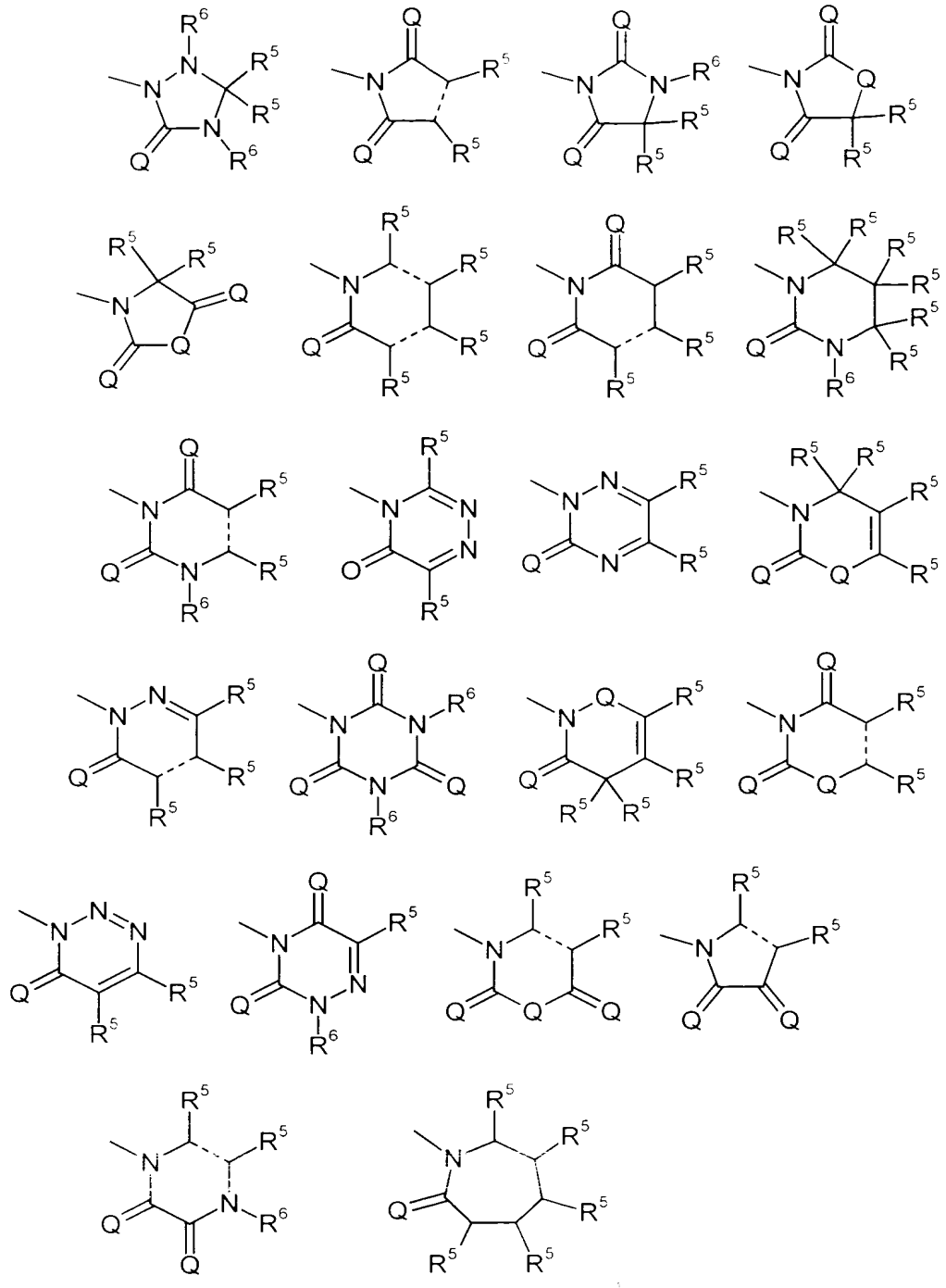
R^2 represents unsubstituted or halogen-substituted alkyl having 1 to 6 carbon atoms, or together with R^1 represents alkanediyl (alkylene) having 2 to 5 carbon atoms, where in this case m represents 1 and R^1 and R^2 are located at the same carbon atom ("geminal") or at two adjacent carbon atoms ("vicinal"),

R^3 represents hydrogen, nitro, cyano, carboxyl, carbamoyl, thiocarbamoyl, halogen, represents unsubstituted or halogen-, C_1-C_4-alkoxy-, C_1-C_4-alkylthio-, C_1-C_4-alkylsulphinyl- or C_1-C_4-alkylsulphonyl-substituted alkyl, alkoxy, alkylthio, alkylsulphinyl or alkylsulphonyl having up to 4 carbon atoms in the alkyl groups, or represents alkylamino, dialkylamino or dialkylaminosulphonyl having up to 4 carbon atoms in the alkyl groups,

R^4 represents nitro, cyano, carboxyl, carbamoyl, thiocarbamoyl, halogen, represents unsubstituted or halogen-, C_1-C_4-alkoxy-, C_1-C_4-alkylthio-, C_1-C_4-alkylsulphinyl- or C_1-C_4-alkylsulphonyl-substituted alkyl, alkoxy, alkylthio, alkylsulphinyl or alkylsulphonyl having up to 4 carbon atoms in the alkyl groups, or represents alkylamino, dialkylamino or dialkylaminosulphonyl having up to 4 carbon atoms in the alkyl groups, and

Z represents one of the heterocyclic groupings below





in which the bond drawn broken in each case denotes a single bond or a double bond,

Q represents oxygen ~~or sulphur~~,

R^5 represents hydrogen, hydroxyl, mercapto, cyano, halogen, or represents unsubstituted or halogen-, C_1-C_4-alkoxy-, C_1-C_4-alkylthio-, C_1-C_4-alkylsulphinyl- or C_1-C_4-alkylsulphonyl-substituted alkyl, alkylcarbonyl, alkoxy, alkoxycarbonyl, alkylthio, alkylsulphinyl or alkylsulphonyl having in each case up to 6 carbon atoms in the alkyl groups, or represents unsubstituted or halogen-substituted alkylamino or dialkylamino having in each case up to 6 carbon atoms in the alkyl groups, or represents unsubstituted or halogen-substituted alkenyl, alkinyl, alkenyloxy, alkenylthio or alkenylamino having in each case up to 6 carbon atoms in the alkenyl or alkinyl groups, or represents unsubstituted or halogen-substituted cycloalkyl, cycloalkylalkyl, cycloalkyloxy, cycloalkylthio or cycloalkylamino having in each case 3 to 6 carbon atoms in the cycloalkyl groups and optionally up to 4 carbon atoms in the alkyl moiety, or represents unsubstituted or halogen-, C_1-C_4-alkyl- or C_1-C_4-alkoxy-substituted phenyl, phenyloxy, phenylthio, phenylamino, benzyl, benzyloxy, benzylthio or benzylamino, and

R^6 represents hydrogen, hydroxyl, amino, alkylideneamino having up to 4 carbon atoms, or represents unsubstituted or halogen- or C_1-C_4-alkoxy-substituted alkyl, alkoxy, alkylamino, dialkylamino or alkanoylamino having in each case up to 6 carbon atoms in the alkyl groups, or represents unsubstituted or halogen-substituted alkenyl, alkinyl or alkenyloxy having in each case up to 6 carbon atoms in the alkenyl or alkinyl groups, or represents unsubstituted or halogen-substituted cycloalkyl, cycloalkylalkyl or cycloalkylamino having in each case 3 to 6 carbon atoms in the cycloalkyl groups and optionally up to 3 carbon atoms in the alkyl

moiety, or represents unsubstituted or halogen-, C_1-C_4-alkyl- or C_1-C_4-alkoxy-substituted phenyl or benzyl, or together with an adjacent radical R^5 or R^6 represents unsubstituted or halogen- or C_1-C_4-alkyl-substituted alkanediyl having 3 to 5 carbon atoms, or - in the case that two adjacent radicals R^5 and R^5 are located at a double bond - together with the adjacent radical R^5 also represents a benzo grouping.

3. (Currently Amended): Substituted benzoylcyclohexanediones according to Claim 1, wherein:

m represents the numbers 0, 1 or 2,

n represents the numbers 0, 1 or 2,

A represents ~~a single bond,~~ methylene, ethylidene (ethane-1,1-diyl) or dimethylene (ethane-1,2-diyl),

R^1 represents hydrogen, or represents unsubstituted or fluorine-, chlorine-, methoxy-, ethoxy-, n- or i-propoxy-, methylthio-, ethylthio-, n- or i-propylthio-, methylsulphinyl-, ethylsulphinyl-, n- or i-propylsulphinyl-, methylsulphonyl-, ethylsulphonyl-, n- or i-propylsulphonyl-substituted methyl, ethyl, n- or i-propyl, n-, i- or s-butyl, or represents methoxycarbonyl, ethoxycarbonyl, n- or i-propoxycarbonyl,

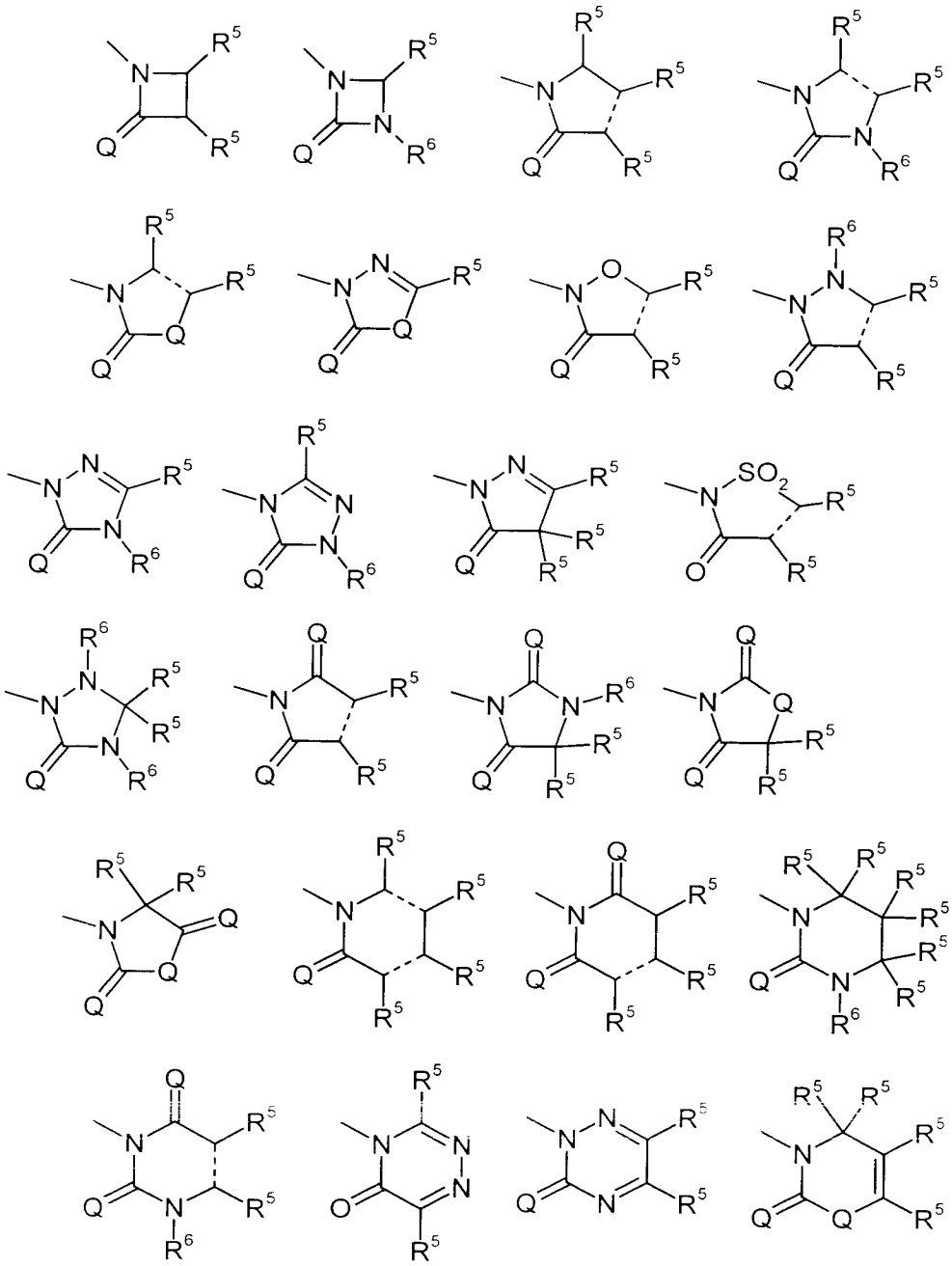
R^2 represents methyl, ethyl, n- or i-propyl, or together with R^1 represents methylene, ethane-1,1-diyl (ethylidene, $-CH(CH_3)-$), ethane-1,2-diyl (dimethylene, $-CH_2CH_2-$), propane-1,3-diyl (trimethylene, $-CH_2CH_2CH_2-$), butane-1,4-diyl (tetramethylene, $-CH_2CH_2CH_2CH_2-$) or pentane-1,5-diyl (pentamethylene, $-CH_2CH_2CH_2CH_2CH_2-$), where

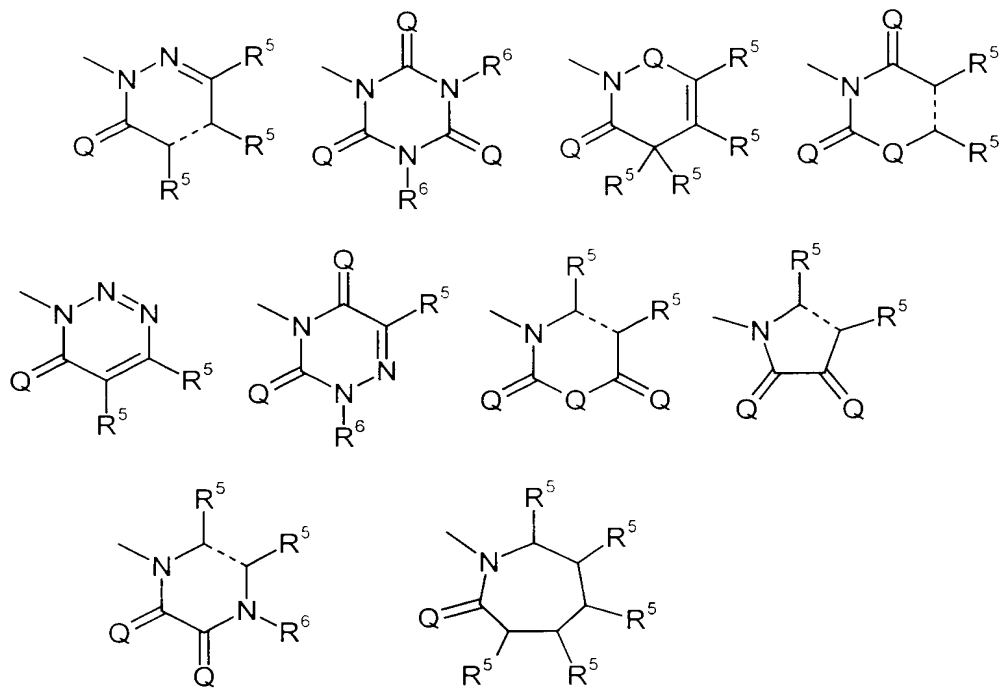
in this case m represents 1 and R^1 and R^2 are located at the same carbon atom ("geminal") or at two adjacent carbon atoms ("vicinal"),

R^3 represents hydrogen, nitro, cyano, carboxyl, carbamoyl, thiocarbamoyl, fluorine, chlorine, bromine, or represents unsubstituted or fluorine- and/or chlorine-, methoxy-, ethoxy-, n- or i-propoxy-, methylthio-, ethylthio-, n- or i-propylthio-, methylsulphinyl-, ethylsulphinyl-, methylsulphonyl- or ethylsulphonyl-substituted methyl, ethyl, n- or i-propyl, n-, i-, s- or t-butyl, or represents unsubstituted or fluorine- and/or chlorine-, methoxy-, ethoxy-, n- or i-propoxy-substituted methoxy, ethoxy, n- or i-propoxy, or represents unsubstituted or fluorine- and/or chlorine-substituted methylthio, ethylthio, n- or i-propylthio, methylsulphinyl, ethylsulphinyl, n- or i-propylsulphinyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, or represents methylamino, ethylamino, n- or i-propylamino, dimethylamino, diethylamino, dimethylaminosulphonyl or diethylaminosulphonyl,

R^4 represents nitro, cyano, carboxyl, carbamoyl, thiocarbamoyl, fluorine, chlorine, bromine, or represents unsubstituted or fluorine-, chlorine-, fluorine and chlorine-, methoxy-, ethoxy-, n- or i-propoxy-, methylthio-, ethylthio-, n- or i-propylthio-, methylsulphinyl-, ethylsulphinyl-, methylsulphonyl- or ethylsulphonyl-substituted methyl, ethyl, n- or i-propyl, n-, i-, s- or t-butyl, or represents unsubstituted or fluorine-, chlorine-, fluorine and chlorine-, methoxy-, ethoxy-, n- or i-propoxy-substituted methoxy, ethoxy, n- or i-propoxy, represents in each case optionally fluorine- and/or chlorine-substituted methylthio, ethylthio, n- or i-propylthio, methylsulphinyl, ethylsulphinyl, n- or i-propylsulphinyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, or represents methylamino, ethylamino, n- or i-propylamino, dimethylamino, diethylamino, dimethylaminosulphonyl or diethylaminosulphonyl, and

Z represents one of the heterocyclic groupings below





in which the bond drawn broken in each case denotes a single bond or a double bond,

Q represents oxygen ~~or sulphur~~,

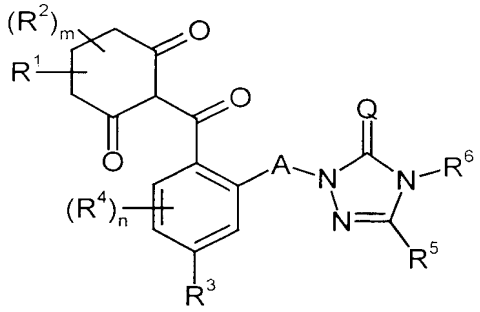
R^5 represents hydrogen, hydroxyl, mercapto, cyano, fluorine, chlorine, bromine, iodine, or represents unsubstituted or fluorine-, chlorine-, methoxy-, ethoxy-, n- or i-propoxy-, n-, i-, s- or t-butoxy-, methylthio-, ethylthio-, n- or i-propylthio-, n-, i-, s- or t-butylthio-, methylsulphinyl-, ethylsulphinyl-, n- or i-propylsulphinyl-, methylsulphonyl-, ethylsulphonyl-, n- or i-propylsulphonyl-substituted methyl, ethyl, n- or i-propyl, n-, i-, s- or t-butyl, methoxy, ethoxy, n- or i-propoxy, n-, i-, s- or t-butoxy, methylthio, ethylthio, n- or i-propylthio, n-, i-, s- or t-butylthio, methylsulphinyl, ethylsulphinyl, n- or i-propylsulphinyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, represents methylamino, ethylamino, n- or i-propylamino, n-, i-,

s- or t-butylamino, dimethylamino, diethylamino, di-n-propylamino or di-i-propylamino, or represents unsubstituted or fluorine-, chlorine-, or fluorine and chlorine-substituted ethenyl, propenyl, butenenyl, ethinyl, propinyl, butinyl, propenyloxy, butenyloxy, propenylthio, butenylthio, propenylamino or butenylamino, or represents unsubstituted or fluorine-, chlorine-, or fluorine and chlorine-substituted cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, cyclopropyloxy, cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cyclopropylthio, cyclobutylthio, cyclopentylthio, cyclohexylthio, cyclopropylamino, cyclobutylamino, cyclopentylamino or cyclohexylamino, or represents unsubstitued or fluorine-, chlorine-, methyl-, ethyl-, n- or i-propyl-, n-, i-, s- or t-butyl-, methoxy-, ethoxy-, n- or i-propoxy-substituted phenyl, phenyloxy, phenylthio, phenylamino, benzyl, benzyloxy, benzylthio or benzylamino, and

R^6 represents hydrogen, hydroxyl, amino, or represents unsubstituted or fluorine-, chlorine-, or fluorine and chlorine-, methoxy-, or ethoxy-substituted methyl, ethyl, n- or i-propyl, n-, i- or s-butyl, methoxy, ethoxy, n- or i-propoxy, methylamino, ethylamino or dimethylamino, or represents unsubstituted or fluorine-, chlorine-, or fluorine and chlorine-substituted ethenyl, propenyl, ethinyl, propinyl or propenyloxy,or represents unsubstituted or fluorine-, chlorine-, or fluorine and chlorine-substituted cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, or represents unsubstituted or fluorine-, chlorine-, methyl-, ethyl-, n- or i-propyl-, n-, i-, s- or t-butyl-, methoxy-, ethoxy-, n- or i-propoxy-substituted phenyl or benzyl, or together with an adjacent radical R^5 or R^6 represents unsubstituted or methyl- and/or ethyl-substituted propane-1,3-

diyl (trimethylene) or butane-1,4-diyl (tetramethylene), or - in the case that two adjacent radicals R^5 and R^5 are located at a double bond - together with the adjacent radical R^5 also represents a benzo grouping.

4. (Currently Amended): A ~~S~~substituted benzoylcyclohexanedione~~s~~ according to Claim 1, having the formula (IA),



(IA)

in which

m represents the numbers 0, 1 or 2,

n represents the numbers 0, 1 or 2,

A ~~represents a single bond or~~ represents methylene,

Q represents oxygen or sulphur,

R^1 represents hydrogen, methyl, ethyl, n- or i-propyl,

R^2 represents methyl,

R^3 represents hydrogen, nitro, cyano, fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, methoxymethyl, methylthiomethyl, methylsulphinylmethyl, methylsulphonylmethyl, methoxy, ethoxy, difluoro-

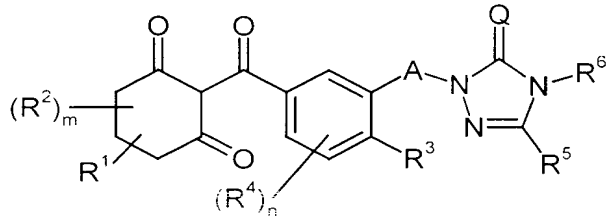
methoxy, trifluoromethoxy, methylthio, ethylthio, methylsulphinyl, ethylsulphinyl, methylsulphonyl, ethylsulphonyl or dimethylaminosulphonyl,

R^4 represents nitro, cyano, fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, methoxymethyl, methylthiomethyl, methylsulphinylmethyl, methylsulphonylmethyl, methoxy, ethoxy, difluoromethoxy, trifluoromethoxy, methylthio, ethylthio, methylsulphinyl, ethylsulphinyl, methylsulphonyl, ethylsulphonyl or dimethylaminosulphonyl,

R^5 represents methyl, ethyl, n- or i-propyl, trifluoromethyl, methoxy, ethoxy, n- or i-propoxy, methylthio, ethylthio, n- or i-propylthio, methylsulphinyl, ethylsulphinyl, n- or i-propylsulphinyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, or represents cyclopropyl, and

R^6 represents methyl, ethyl, methoxy, ethoxy or cyclopropyl.

5. (Currently Amended): A substituted benzoylcyclohexanedione according to Claim 1, having the formula (IB),



(IB)

in which

m represents the numbers 0, 1 or 2,

n represents the numbers 0, 1 or 2,

A ~~represents a single bond or~~ represents methylene,

Q represents oxygen or sulphur,

R^1 represents hydrogen, methyl, ethyl, n- or i-propyl,

R^2 represents methyl,

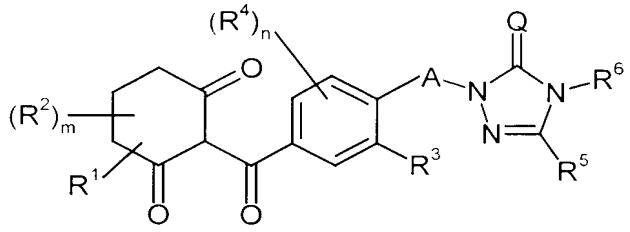
R^3 represents hydrogen, nitro, cyano, fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, methoxymethyl, methylthiomethyl, methylsulphinylmethyl, methylsulphonylmethyl, methoxy, ethoxy, difluoromethoxy, trifluoromethoxy, methylthio, ethylthio, methylsulphinyl, ethylsulphinyl, methylsulphonyl, ethylsulphonyl or dimethylaminosulphonyl,

R^4 represents nitro, cyano, fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, methoxymethyl, methylthiomethyl, methylsulphinylmethyl, methylsulphonylmethyl, methoxy, ethoxy, difluoromethoxy, trifluoromethoxy, methylthio, ethylthio, methylsulphinyl, ethylsulphinyl, methylsulphonyl, ethylsulphonyl or dimethylaminosulphonyl,

R^5 represents methyl, ethyl, n- or i-propyl, trifluoromethyl, methoxy, ethoxy, n- or i-propoxy, methylthio, ethylthio, n- or i-propylthio, methylsulphinyl, ethylsulphinyl, n- or i-propylsulphinyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, or represents cyclopropyl, and

R^6 represents methyl, ethyl, methoxy, ethoxy or cyclopropyl.

6. (Currently Amended): A Ssubstituted benzoylcyclohexanedione~~s~~ according to Claim 1, having the formula (IC),



(IC)

in which

m represents the numbers 0, 1 or 2,

n represents the numbers 0, 1 or 2,

A ~~represents a single bond or~~ represents methylene,

Q represents oxygen or sulphur,

R^1 represents hydrogen, methyl, ethyl, n- or i-propyl,

R^2 represents methyl,

R^3 represents hydrogen, nitro, cyano, fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, methoxymethyl, methylthiomethyl, methylsulphinylmethyl, methylsulphonylmethyl, methoxy, ethoxy, difluoromethoxy, trifluoromethoxy, methylthio, ethylthio, methylsulphinyl, ethylsulphinyl, methylsulphonyl, ethylsulphonyl or dimethylaminosulphonyl,

R^4 represents nitro, cyano, fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, methoxymethyl, methylthiomethyl, methylsulphinyl-methyl, methylsulphonylmethyl, methoxy, ethoxy, difluoromethoxy, trifluoromethoxy, methylthio, ethylthio, methylsulphinyl, ethylsulphinyl, methylsulphonyl, ethylsulphonyl or dimethylaminosulphonyl,

R^5 represents methyl, ethyl, n- or i-propyl, trifluoromethyl, methoxy, ethoxy, n- or i-propoxy, methylthio, ethylthio, n- or i-propylthio, methylsulphinyl, ethylsulphinyl, n- or i-propylsulphinyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, or represents cyclopropyl, and

R^6 represents methyl, ethyl, methoxy, ethoxy or cyclopropyl.

7. (Currently Amended): A ~~S~~substituted benzoylcyclohexanedione~~s~~ according to Claim 1, wherein the salts are the sodium, potassium, magnesium, calcium, ammonium, C_1-C_4-alkyl-ammonium, di-(C_1-C_4-alkyl)-ammonium, tri-(C_1-C_4-alkyl)-ammonium, tetra-(C_1-C_4-alkyl)-ammonium, tri-(C_1-C_4-alkyl)-sulphonium, C_5- or C_6-cycloalkyl-ammonium and di-(C_1-C_2-alkyl)-benzyl-ammonium salts.

8. (Cancelled).

9. (Cancelled).

10. (Currently Amended): A method of controlling undesirable plants, comprising the step of applying one or more substituted benzoylcyclohexanediones according to Claim 1 to undesirable plants or their habitats.

11. (Currently Amended): A ~~H~~herbicidal compositions~~, characterized in that they contain~~comprising one or more substituted benzoylcyclohexanediones according to Claim 1 and an extender.

Claims 12-20. (Cancelled).